PEPFAR use case: Complex data modelling

DHIS2 Annual Conference
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PEPFAR use case: Complex data modelling

1. Modelling mechanisms:
   data set dimensions using attribute categories

2. Modelling agencies and partners (and subpartners):
   category option groups and group sets
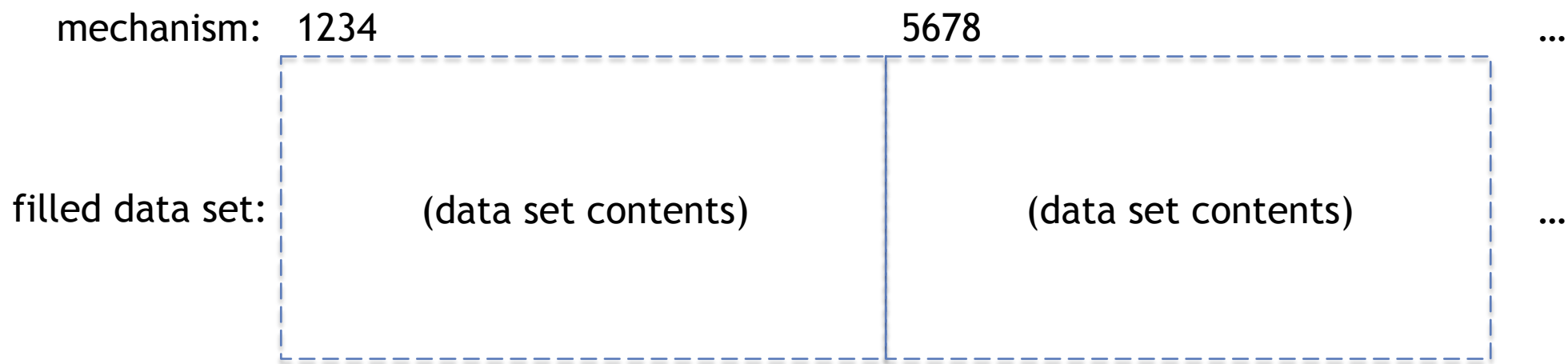
3. Modelling data approval:
   data approval levels
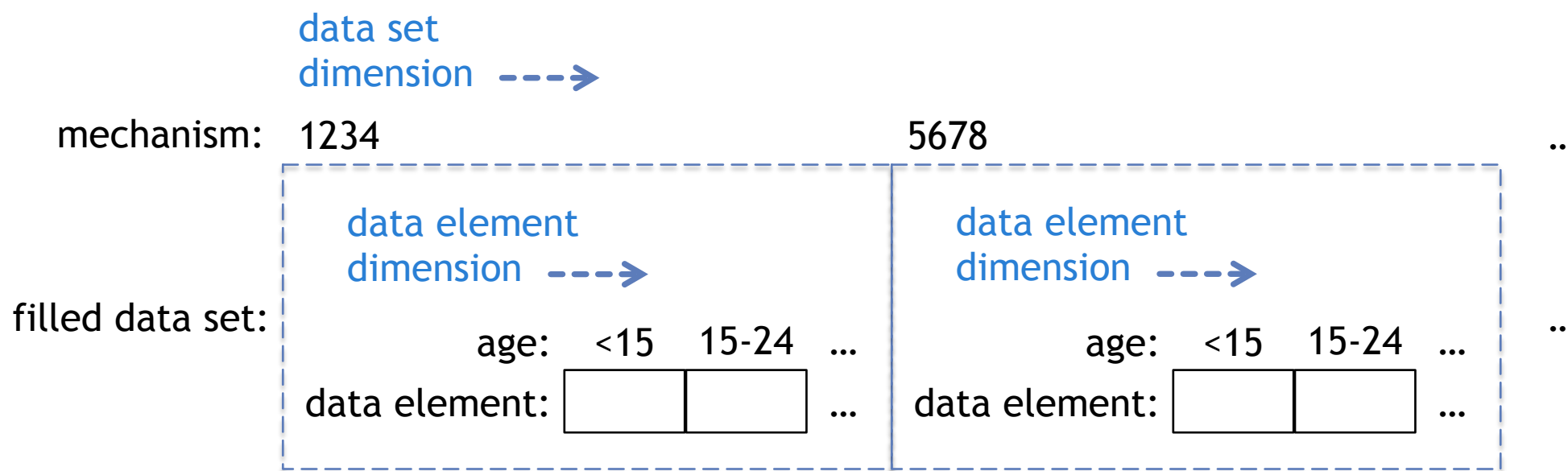
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Modelling PEPFAR mechanisms

1. Modelling mechanisms:
   data set dimensions using attribute categories

Modelling PEPFAR mechanisms

"implementing mechanism" — the PEPFAR name for a project

mechanism: 1234   5678   ...

filled data set: (data set contents)   (data set contents)   ...

Modelling PEPFAR mechanisms

data set
dimension ----▶

mechanism: 1234   5678   ...

filled data set:

data element   data element
dimension ----▶   dimension ----▶

age: <15   15-24   ...   age: <15   15-24   ...   ...
data element: [|] ...   data element: [|] ...

data **element** *dimensions: disaggregation categories*

(e.g., age, sex, test result; also called category options)

data **set** *dimensions: attribute categories*

(extra dimensions: projects, partners, accounts, etc.)

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Data Entry

HIV testing and counseling

Filter in section	<15y	15-24y	25-49y	>49y
HIV: currently on care	19	32	44	45
HIV: new on care	42	44	46	36

data element dimensions: disaggregation categories

Data Entry ❓

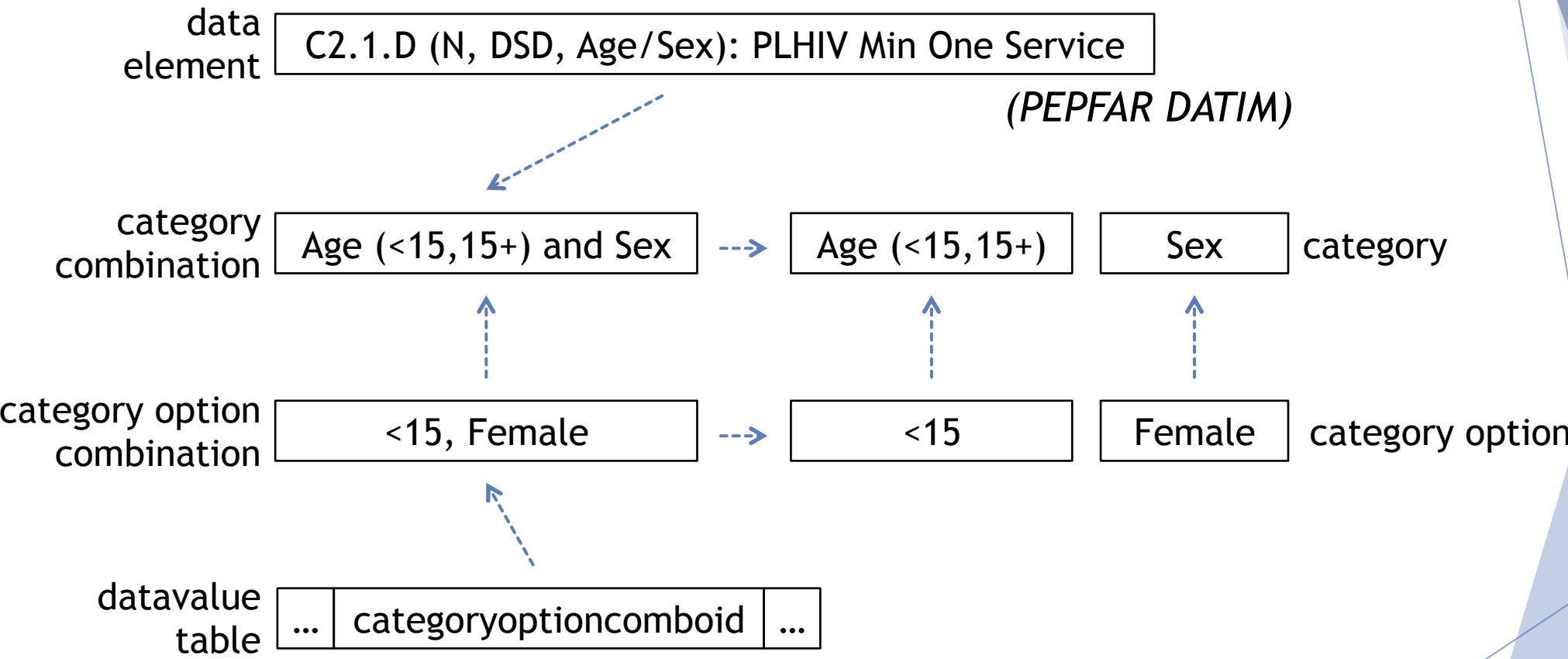|	
Organisation Unit	Sierra Leone
Data Set	ART monthly summary ⬍
Period	July 2017 ⬍ Prev year Next year
Implementing Partner	APHIAplus ⬍
Project	[Select option] ⬍

data set dimensions: attribute categories

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data set dimensions: attribute categories
(extra dimensions: projects, partners, accounts, etc.)
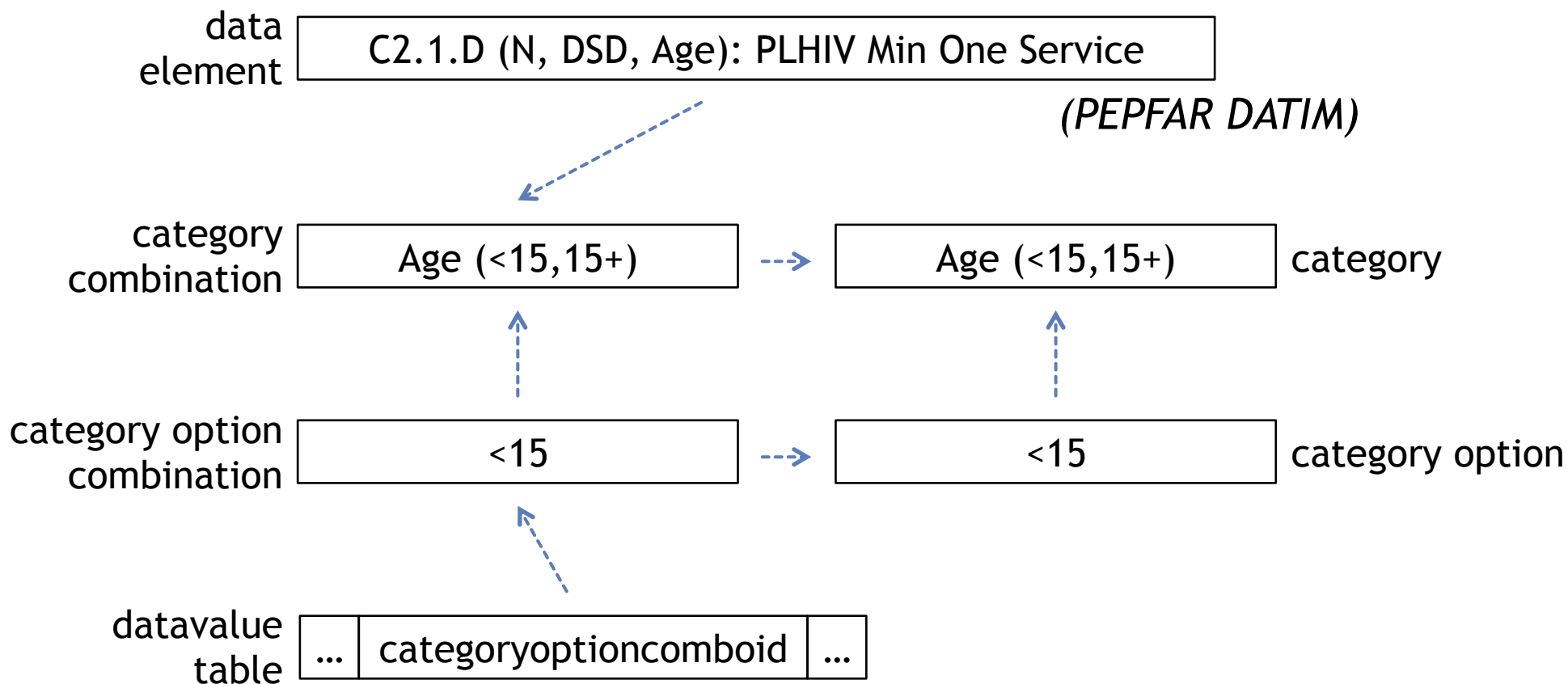
are based on

data element dimensions: disaggregation categories
(disaggregations: age, sex, test result, etc.)
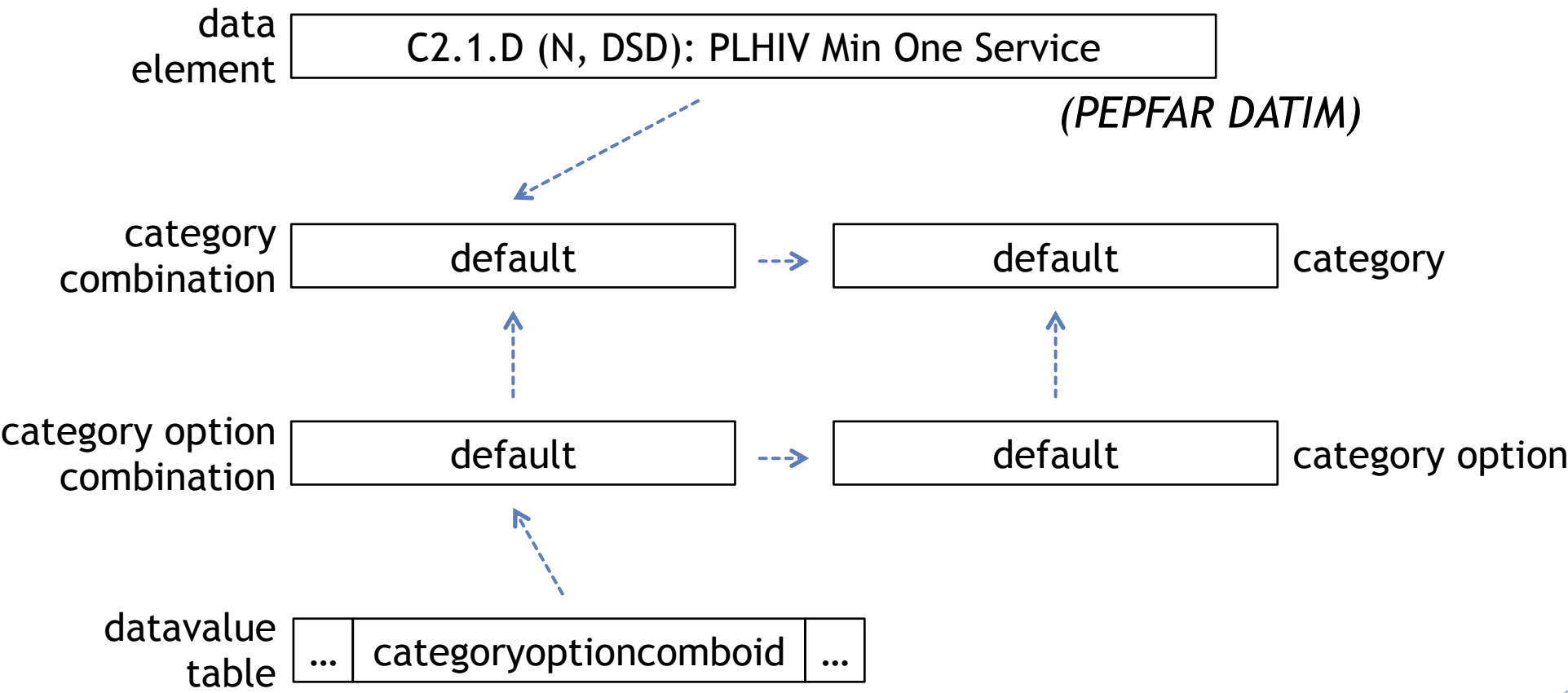
Two data element dimensions: age, sex

data
element
C2.1.D (N, DSD, Age/Sex): PLHIV Min One Service

(PEPFAR DATIM)

category
combination
Age (<15,15+) and Sex	- ->	Age (<15,15+)		Sex	category

category option
combination
<15, Female	- ->	<15		Female	category option

datavalue
table
...	categoryoptioncomboid	...

data element dimensions: disaggregation categories

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One data element dimension: age

data element | C2.1.D (N, DSD, Age): PLHIV Min One Service

(PEPFAR DATIM)

category combination | Age (<15,15+) ⇢ Age (<15,15+) | category

category option combination | <15 ⇢ <15 | category option

datavalue table | ... | categoryoptioncomboid | ...

data element dimensions: disaggregation categories

Zero data element dimensions

data
element

C2.1.D (N, DSD): PLHIV Min One Service

(PEPFAR DATIM)

category
combination

| default | |---> | default | category

category option
combination

| default | |---> | default | category option

datavalue
table

| ... | categoryoptioncomboid | ... |

data element dimensions: disaggregation categories

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Zero data set dimensions

data set — Host Country Results: Narratives (USG)

(PEPFAR DATIM)

category combination — default --> default — category

category option combination — default --> default — category option

datavalue table — ... | categoryoptioncomboid | ... | attributeoptioncomboid

data element dimensions: disaggregation categories

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One data set dimension: PEPFAR mechanism

data set	MER Results: Facility Based

(PEPFAR DATIM)

category combination	Mechanism

→ Mechanism — category

category option combination	1234

→ 1234 — category option

datavalue table	… categoryoptioncomboid … attributeoptioncomboid

data element dimensions: disaggregation categories

Two data set dimensions: partner, project

data
set

ART Monthly Summary

(Sierra Leone demo)

category
combination

Partner and Project	- - >	Partner		Project	category

category option
combination

UNICEF, clean water	- - >	UNICEF		clean water	category option

datavalue
table

…	categoryoptioncomboid	…	attributeoptioncomboid

data set dimensions: attribute categories

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PEPFAR use case: Complex data modelling

1. Modelling mechanisms:
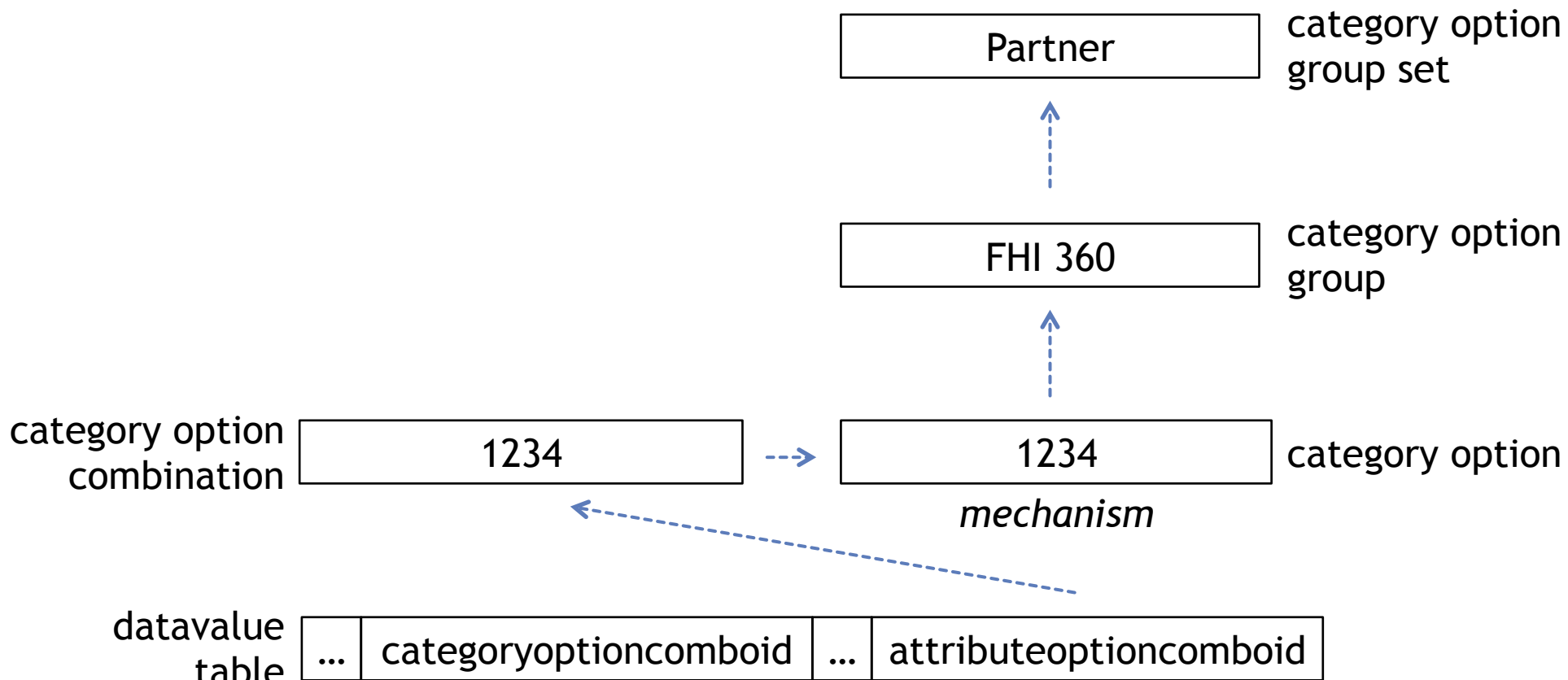   *data set dimensions using attribute categories*

2. Modelling agencies and partners (and subpartners):
   category option groups and group sets

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Modeling PEPFAR agencies and partners

agency
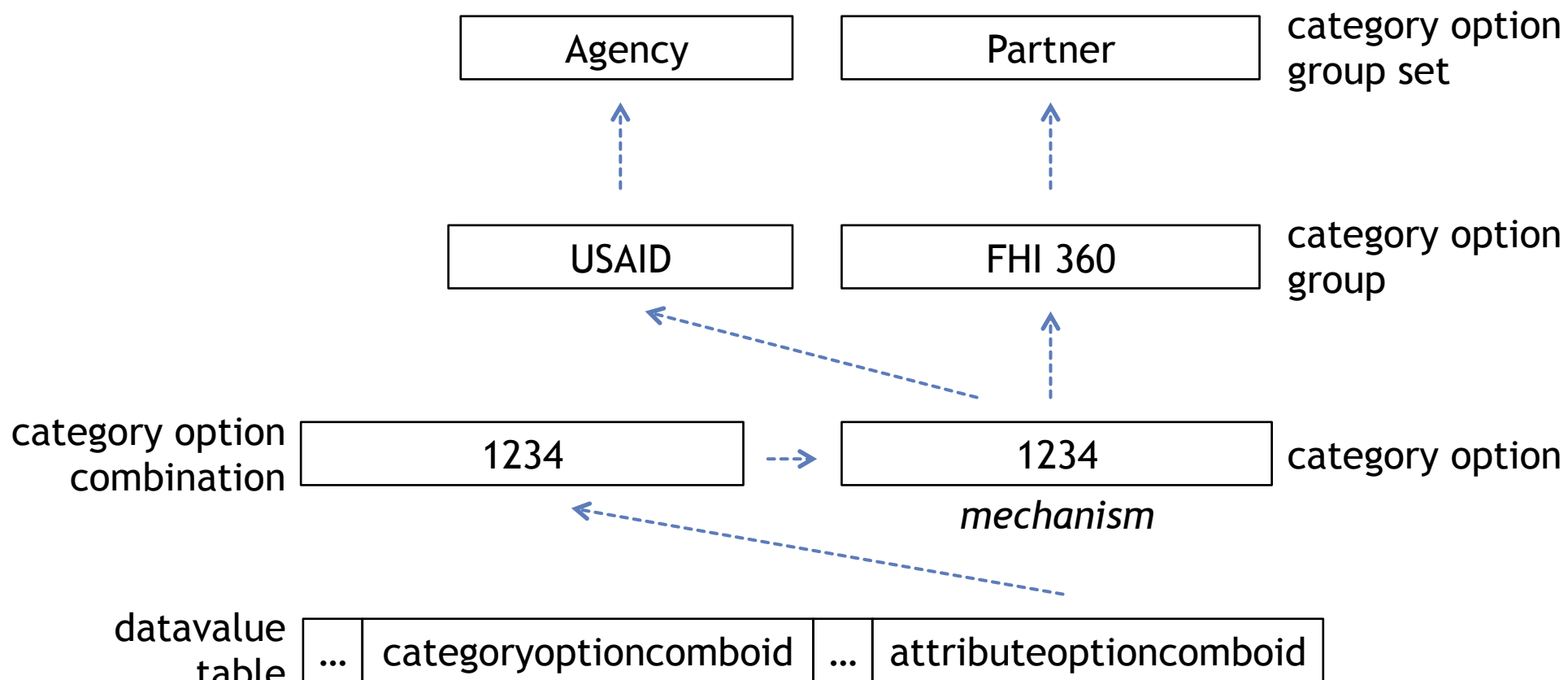
partner

mechanism
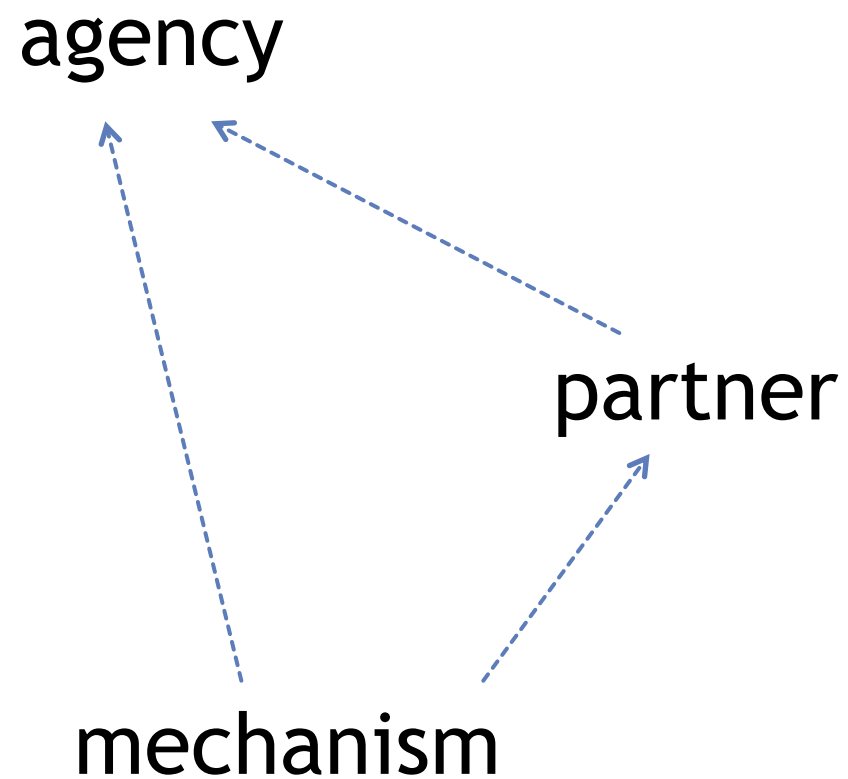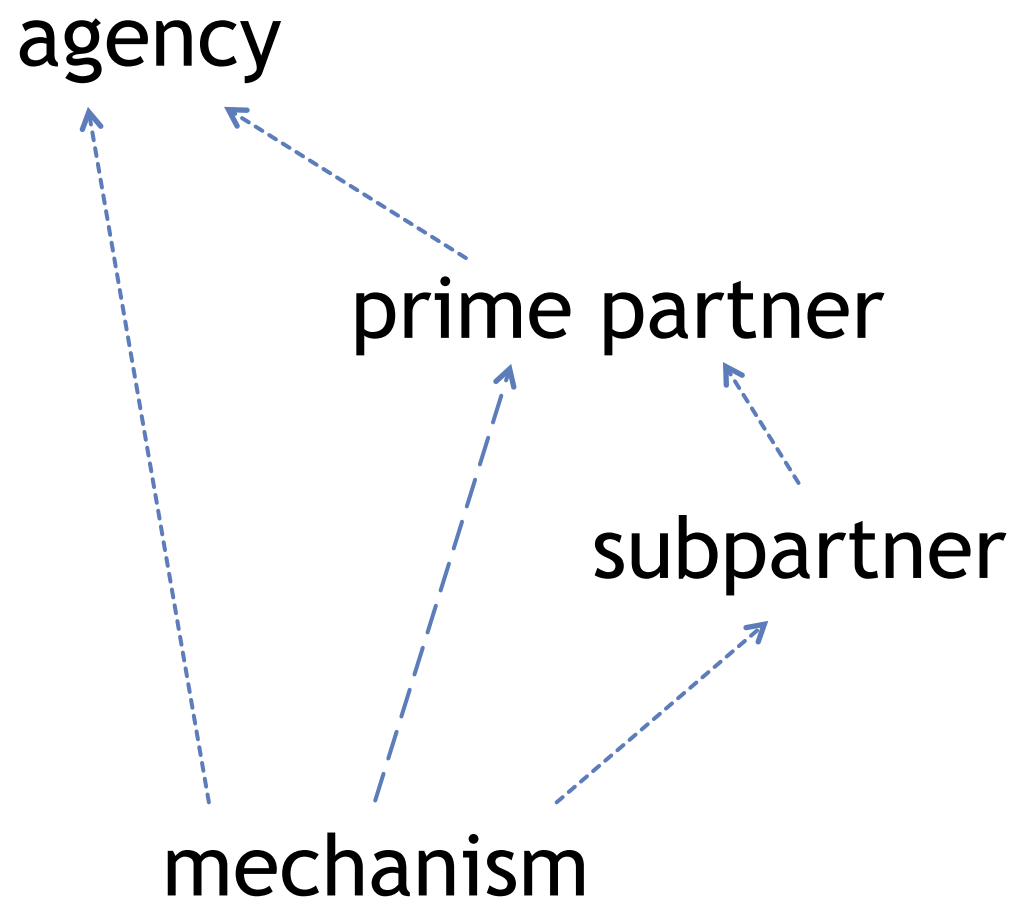
PEPFAR partners

category option groups and group sets
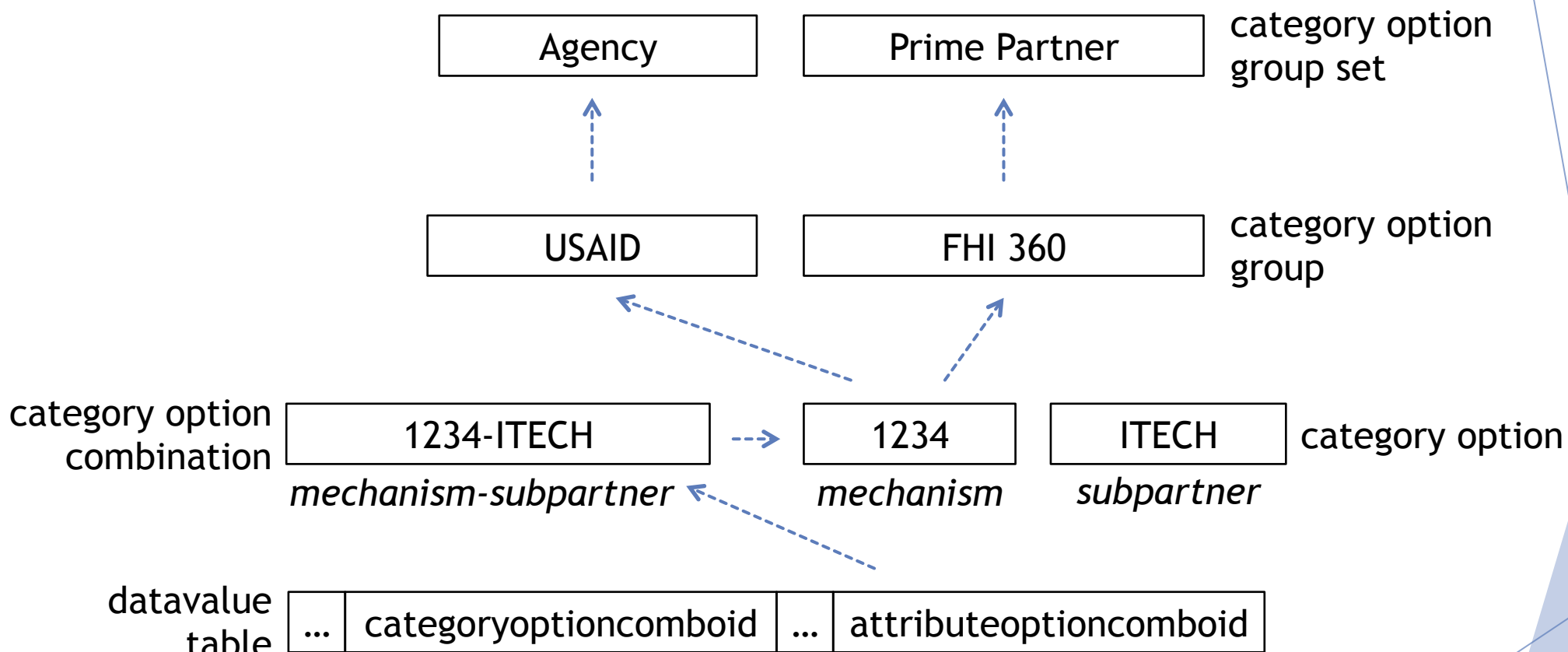
PEPFAR agencies and partners
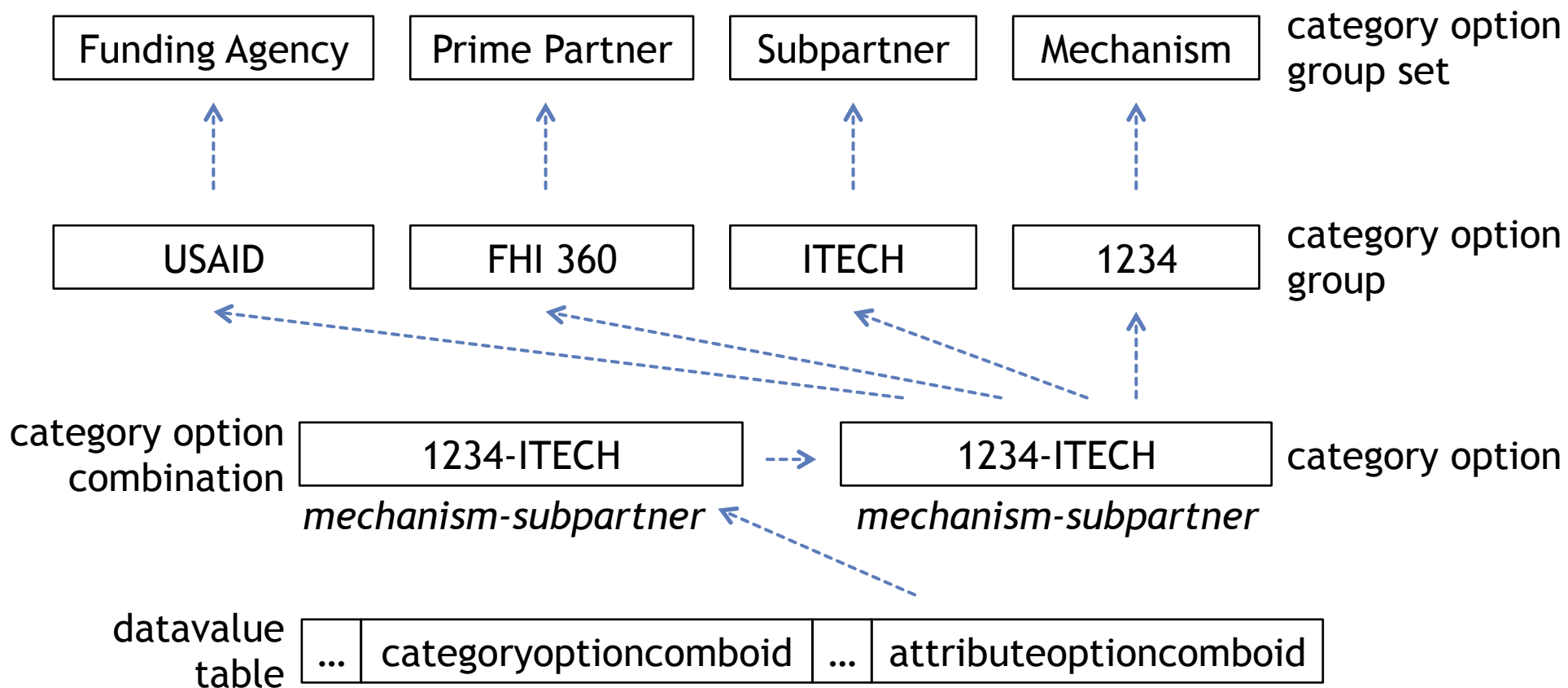

category option groups and group sets

Modelling PEPFAR subpartners (possible future)

Possible PEPFAR subpartners (2 dimensions)

Possible PEPFAR subpartners (1 dimension)

| Funding Agency | Prime Partner | Subpartner | Mechanism | category option group set |

| USAID | FHI 360 | ITECH | 1234 | category option group |

category option combination

| 1234-ITECH | | 1234-ITECH | category option |
mechanism-subpartner | | *mechanism-subpartner* |

datavalue table

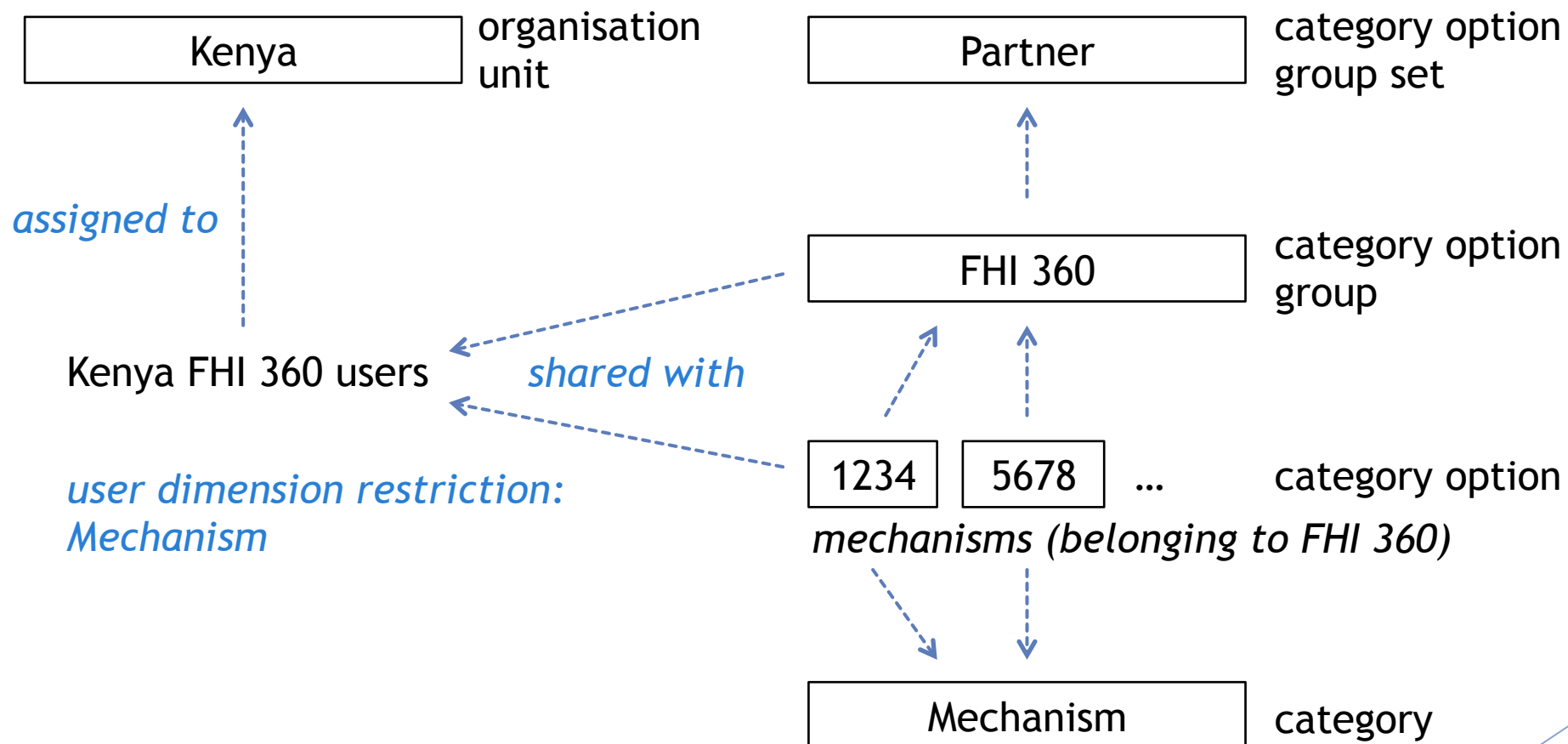| ... | categoryoptioncomboid | ... | attributeoptioncomboid |

PEPFAR use case: Complex data modelling

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→ 3. Modelling data approval:
   data approval levels

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Modelling PEPFAR Data approval

PEPFAR Partner users

Kenya — organisation unit

Partner — category option group set

assigned to

Kenya FHI 360 users

shared with

FHI 360 — category option group

user dimension restriction: Mechanism

1234   5678   ... — category option

mechanisms (belonging to FHI 360)

Mechanism — category

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PEPFAR Agency users

| Kenya | organisation unit |

assigned to

Kenya USAID users   *shared with*

user dimension restriction:
Mechanism

| Agency | category option group set |

| USAID | category option group |

| 1234 | 5678 | ... | category option

mechanisms (belonging to USAID)

| Mechanism | category |

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PEPFAR Interagency country users

PEPFAR Global users

| Global | organisation unit |

| Agency | Partner | category option group set |

assigned to

| USAID | FHI 360 | category option group |

Global users

shared with

| 1234 | 5678 | ... | category option |

user dimension restriction: (none)

all mechanisms

| Mechanism | category |

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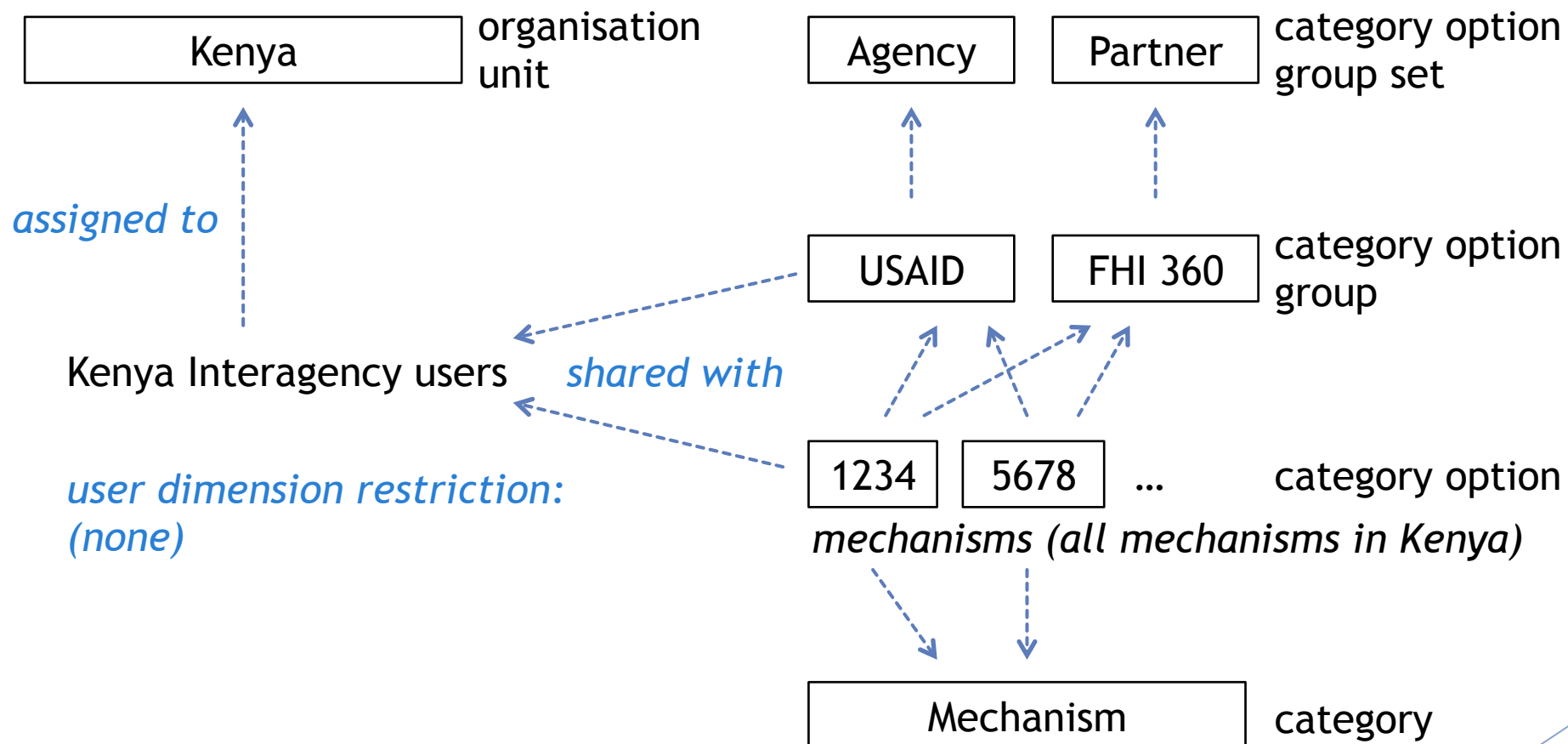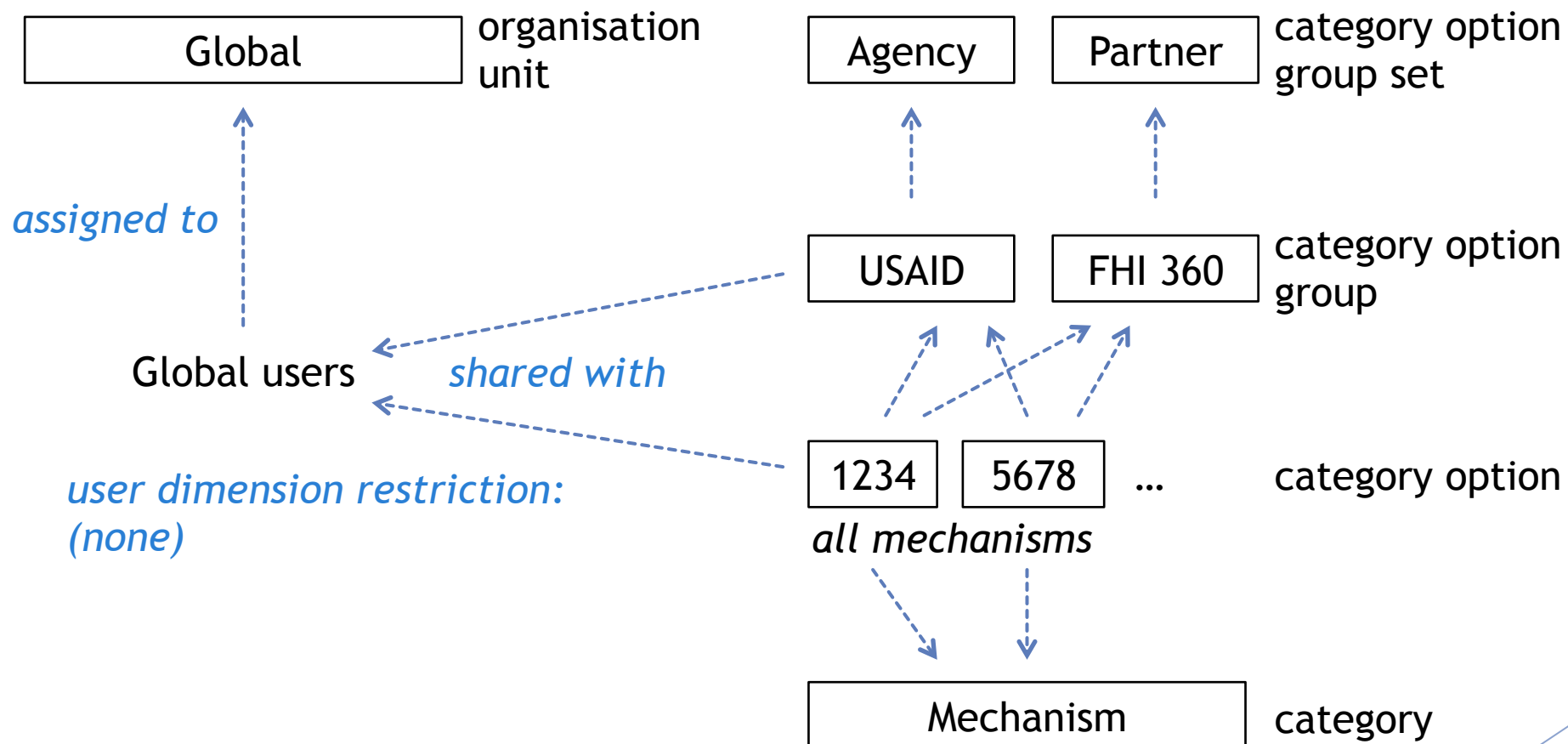
PEPFAR data approval levels

Data approval level management ⑦

Search by name

Name	Level	Organisation unit level	Category option group set
Global	1	1	
Inter-Agency	2	3	
Funding Agency	3	3	Funding Agency
Implementing Partner	4	3	Implementing Partner

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   data approval levels

Thank you!

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